

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2001-205206

(43)Date of publication of application : 31.07.2001

---

(51)Int.Cl. B08B 3/12

C11D 1/83

C11D 17/08

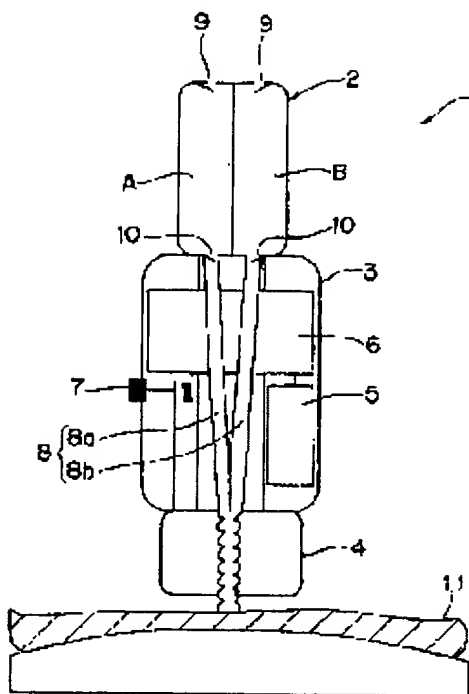
---

(21)Application number : 2000-014631 (71)Applicant : KAO CORP

(22)Date of filing : 24.01.2000 (72)Inventor : CHIWAKI MASAHIITO  
YAMADA ISAO  
NISHIMURA HIROSHI  
AOYANAGI MUNEO

---

(54) ULTRASONIC CLEANING APPARATUS



(57)Abstract:

**PROBLEM TO BE SOLVED:** To provide an ultrasonic cleaning apparatus made compact to a degree usable in a general home and capable of easily performing effective cleaning.

**SOLUTION:** A cleaning liquid cartridge 2 housing two kinds of cleaning liquids is connected to the upper part of an apparatus part 3 which is equipped with a battery 5, an ultrasonic oscillation circuit 6 and cleaning liquid piping 8 for guiding two cleaning liquids to the an ultrasonic generation part 4 from the cleaning liquid cartridge 2. The ultrasonic generation part 4 provided to the lower part of the apparatus part 3 has a discharge part for discharging the cleaning liquids guided from the

cleaning liquid piping 8 and a brush is arranged to this discharge part. When the switch 7 of the apparatus part 3 is closed, two kinds of the cleaning liquids housed in the cleaning liquid cartridge 2 are mixed on the way of the cleaning liquid piping 8 to generate heat and the heated cleaning liquid mixture receives ultrasonic waves in the ultrasonic generation part 4 to be discharged to the contaminant of an object to be cleaned and the brush of the ultrasonic generation part applies ultrasonic vibration to the object to be cleaning and the brush of the ultrasonic generation part applies ultrasonic vibration to the object to be cleaned to effectively decompose and remove the contaminant.

## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's  
decision of rejection]

[Date of requesting appeal against  
examiner's decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2000 Japan Patent Office

\* NOTICES \*

Japan Patent Office is not responsible for any  
damages caused by the use of this translation.

1.This document has been translated by computer. So the translation may not reflect the  
original precisely.

2.\*\*\*\* shows the word which can not be translated.

3.In the drawings, any words are not translated.

---

CLAIMS

---

[Claim(s)]

[Claim 1] The ultrasonic cleaner which prepared the control section which it is the  
ultrasonic cleaner which prepared the insertion section which equips a mainframe with the  
penetrant-remover hold section, and the ultrasonic occurrence section which gives a  
supersonic oscillation to a penetrant remover, and is the cartridge to which the

above-mentioned penetrant-remover hold section held in the interior the cartridge which put in the penetrant remover, the bag into which the penetrant remover was put, or the bag into which the penetrant remover was put, and controls the amount of supply of the penetrant remover from the above-mentioned penetrant-remover hold section.

[Claim 2] The ultrasonic cleaner according to claim 1 which mixes and uses the penetrant remover which the above-mentioned penetrant-remover hold section is two or more, and is supplied from these.

[Claim 3] The washing technique which washes a washed object using a ultrasonic cleaner according to claim 1 or 2.

[Claim 4] The washing technique according to claim 3 that the penetrant remover supplied from a mainframe contains 5 - 60 % of the weight of nonionic surface active agents, and 0.5 - 40 % of the weight of anionic surfactants.

---

[Translation done.]